

ESF 3: Public Works & Engineering

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1.0 Introduction

Coordinating Agency:

- Lewis & Clark County Disaster & Emergency Services

Primary Agencies:

- Helena City Public Works
- East Helena Public Works
- Lewis & Clark County Public Works

Support Agencies:

- City & County Law Enforcement Agencies
- Public Utility Companies
- Private Industry (construction, utilities, etc.)
- Montana Disaster & Emergency Services
- Montana Department of Transportation

1.1 Purpose

This ESF is developed for the cooperative efforts of Lewis & Clark County and the incorporated municipalities to perform public works and engineering tasks in the event of a disaster or emergency. It is intended to provide for support to local jurisdictions in meeting needs related to response and recovery

1.2 Scope

The scope of this ESF is to remove debris from streets, manage storm damage, provide rapid restoration of water/sewer services, repair essential services, immediately provide damage assessment information and cooperate with other emergency agencies. Activities within the scope of this ESF include providing technical evaluations, engineering services, construction management, emergency contracting, emergency repair of water and waste facilities, debris clearance, landfill and emergency power.

1.3 ESF Activation & Plan Maintenance

ESF 3 may be activated independently or in conjunction with other ESFs, depending on the needs of the situation. The ESF 3 Coordinating and Primary Agencies will be responsible for review and revision of this annex.

1.4 Policies

- ❖ Support for public works field operations should be coordinated with the Emergency Operations Center (EOC).
- ❖ Each organization under this ESF should follow its own internal SOPs when responding to an incident. When appropriate, agencies should assign a representative to the EOC or command post, as the circumstances dictate.
- ❖ Appropriate local agencies, volunteers, and private sector resources should be used as available to provide assistance for public works and engineering activities.
- ❖ Debris clearance and road repairs should be given priority to support immediate life saving emergency response activities.
- ❖ Public works and engineering requests that cannot be met at the local level should be forwarded to State DES for assistance.
- ❖ Agencies should perform tasks within their own policies, authority, and guidelines for providing public works and engineering services.

2.0 Situation & Assumptions

2.1 Situation

- ❖ Property damages may be unprecedented in an emergency or disaster including weakened or destroyed structures, homes, public and critical facilities, roads, and bridges. Debris may make transportation routes impassible. Equipment used to repair or otherwise reinforce these structures may also be damaged. A large enough event may adversely affect the ability of local responders to perform their emergency duties.
- ❖ The Public Works Departments of the County and local jurisdictions have their own equipment and tools necessary to complete daily functional activities. Some equipment may be specialized to perform only specific tasks. The number of staff trained on particular equipment may vary. Equipment, personnel, and tools used on a normal basis may or may not apply to the disaster or emergency situation. Therefore, public works and engineering assistance will be provided as resources permit.
- ❖ Building Departments of the County and local jurisdictions conduct services such as building and structure assessments, and enforcement of building codes. They are trained to identify vulnerabilities to structures based on specific criteria and regulations.
- ❖ There are several private companies that may provide emergency services for the response effort to help restore critical infrastructure. There are natural and propane gas utilities, cable companies, excavation and construction companies, and a plentitude of others.
- ❖ The public utility companies use an array of equipment ranging in size from small pick-up trucks to large cranes. They employ linemen, systems analysts, hydro-electrical and vehicle mechanics, and engineers. They also employ public information, customer service, and administrative staff.

2.2 Assumptions

- ❖ A major emergency or disaster may cause extensive damage to property and infrastructure. Structures may be destroyed or severely weakened. Homes, public buildings, bridges, and other facilities may have to be reinforced or demolished to ensure safety. Debris may make streets and highways impassable. Public utilities may be damaged or be partially or fully inoperable.
- ❖ Access to disaster areas may be dependent upon the re-establishment of ground routes. In many locations, debris clearance and emergency road repairs will be given top priority to support immediate lifesaving emergency response activities.
- ❖ Damage assessment of the disaster area will be required to determine potential work load.
- ❖ Assistance from the State and Federal government may be needed to clear debris, perform damage assessments, structural evaluations, make emergency repairs to essential public facilities, reduce hazards by stabilizing or demolishing structures, and provide emergency water for human health needs and firefighting.
- ❖ Debris may include trees, rocks, dirt and sand, building materials, metal, garbage and sewage, damaged vehicles, various hazardous materials, tires, and personnel property.
- ❖ Hazardous [CBRNE](#) materials will need special handling from appropriately trained and equipped teams.
- ❖ Following disasters that result in significant debris, existing disposal sites may not represent effective debris management solutions because of capacity limitations and continuous, regular solid waste management operations.
- ❖ Emergency environmental waivers and legal clearances may be needed for disposal of materials from debris clearance and demolition activities for the protection of threatened public and private improvements.
- ❖ Unattended and long-standing debris may pose safety and health threats to the public.
- ❖ Significant numbers of personnel with engineering and construction skills along with construction equipment and materials may be required from outside the disaster area.

3.0 Concept of Operations

3.1 General

- ❖ In the event of a major emergency requiring the activation of public works services, all necessary equipment and personnel will be mobilized and dispatched to the scene and be part of the Operations Section.
- ❖ Operations begin with support to law enforcement, emergency medical and fire services, and damage assessment teams. As information comes in from damage assessments, priorities for debris clearance and restoration of critical infrastructure such as roads, bridges, potable water, and sewer systems will be developed.
- ❖ In major emergency situations, priorities for emergency engineering operations will be established by the ESF Coordinator working with the other agency heads from either the EOC or the Incident Command Post (ICP).
- ❖ An assessment of the condition of public infrastructure will be conducted and the information analyzed to determine the criticality of immediate repair, restoration, or demolition of any structure or facility.
- ❖ The status of the public infrastructure, particularly the condition of water supply, wastewater, and solid waste treatment facilities, will be disseminated among emergency response agencies and local governments.
- ❖ If the situation is beyond the capabilities of the local public works departments, personnel and equipment may be provided for with assistance from county, city, state, federal government and/or out of the area public works departments and/or by the contracting of private resources from within the area.

3.2 Notifications

- ❖ The DES Coordinator will notify the ESF 3 Primary Agency of EOC activations and request that representatives report to the EOC to coordinate ESF 3 activities.
- ❖ As additional EOC staffing needs become apparent, other support and partnering agency personnel may be asked to report to the EOC to assist with transportation activities. Depending on the nature and location of the emergency, state and federal officials may also become critical members of the ESF 3 team.

3.3 Preparedness

- ❖ Maintain an inventory of available resources including personnel within their departments.
- ❖ Develop and maintain SOPs for emergency and disaster situations.
- ❖ Develop and maintain mutual aid agreements with neighboring jurisdictions.
- ❖ Coordinate emergency planning activities and information with neighboring jurisdictions and the ESF Coordinator.
- ❖ Maintain and test communication systems.
- ❖ Identify vital and essential roadways, bridges and facilities to establish a repair priority in the event any of these become damaged.
- ❖ Assure that personnel are trained in emergency responsibilities.
- ❖ Establish contact with private resources that could provide support during an emergency.

3.4 Response

- ❖ Provide a senior official to operate from the EOC or other command location to assure coordination with other agencies, as necessary.
- ❖ Provide public works and engineering support on a priority basis as determined by the EOC and the Incident Commander(s).
- ❖ Inspect damage to streets, bridges, and public buildings.
- ❖ Clear roads to facilitate emergency operations.
- ❖ Close roads and construct barricades as directed.
- ❖ Make recommendations on priority of repairs.
- ❖ Request outside assistance from surrounding jurisdictions and the private sector as required.
- ❖ Conduct other specific response actions as dictated by the situation.

Section II: Emergency Support Functions

- ❖ Maintain records and document all expenditures during the emergency situation.

3.5 Recovery

- ❖ Continue to repair infrastructure and buildings on a priority basis.
- ❖ Continue all activities in coordination with the EOC based on the requirements of the incident.
- ❖ Provide information concerning dangerous areas or other existing problems.
- ❖ Provide liaison activities between local agencies and federal damage assessment teams, as appropriate.
- ❖ Establish control measures related to emergency solid waste disposal.
- ❖ Participate in after-action reports and critiques.
- ❖ Document disaster and restoration cost for possible federal reimbursement.

3.6 Mitigation

- ❖ Identify and seek funds for retrofitting critical facilities and providing auxiliary power.
- ❖ Recommend changes in planning, zoning, and building codes to prevent or lessen the effect of future disasters.
- ❖ Participate in hazard identification process and identify and correct vulnerabilities in the public works system.
- ❖ Regularly maintain equipment to ensure it is in good running order.

4.0 Organization & Responsibilities

4.1 Organization

- ❖ Public Works support will most likely be coordinated through the Emergency Operations Center (EOC). ESF 3 Agency Reps in the EOC will be organized under the ICS Operations Section as either a stand-alone “Team” or as part of a functional Group depending upon the needs of the incident.

4.2 Responsibilities

ESF Coordinator

- ❖ Coordinate all responding public and private public works and engineering resources and work with the EOC team to ensure required emergency tasks can be accomplished.
- ❖ Assess the need for outside public works and engineering resources to support emergency operations and request assistance as needed.
- ❖ Serve as liaison with private contractors and if necessary, with state and federal public works and engineering resources.
- ❖ Work with those responsible for damage assessment to ensure that appropriately trained personnel are deployed to assess damage to all roads, bridges, public buildings and other potentially affected infrastructure.
- ❖ Ensure public works and engineering personnel deployed to the disaster scene(s) are appropriately outfitted with and trained to use personal protective equipment required by the presence of any potentially hazardous materials/substances.
- ❖ Work with the Support Agencies and private contractors to facilitate debris clearance, collection, reduction and disposal.
- ❖ Participate in hazard identification process and identify and correct vulnerabilities in the public works system.

Primary Agency

- ❖ When requested, deploy a representative to the EOC to assist with ESF-3 activities.
- ❖ Provide personnel for internal and external Preliminary Damage Assessment teams.
- ❖ Coordinate with support agencies to supply services and resources through the EOC and provide initial damage assessment on public facilities.

Section II: Emergency Support Functions

- ❖ Have available a list of public works and engineering related assets available to support recovery and coordinate this information with the EOC.
- ❖ Evaluate the availability, operational condition and duration of need as well as logistical requirements necessary to obtain critically needed equipment.
- ❖ Develop procedures/guidelines to obtain private sector support as required.
- ❖ Maintain records of expenditures and document resources utilized during recovery.
- ❖ Coordinate with support agencies through at least quarterly meetings to ensure planning functions are carried out to support this ESF.
- ❖ Develop applicable SOPs, guidelines and/or checklists detailing the accomplishment of assigned functions.
- ❖ Participate in drills and exercises to evaluate local communications capability.

Support Agencies

- ❖ Help repair and reestablish essential services, coordinate the mobilization of personnel and equipment, and conduct critical infrastructure inspections as appropriate.
- ❖ Develop applicable SOPs, guidelines and/or checklists detailing the accomplishment of assigned functions.
- ❖ Participate in drills and exercises to evaluate local communications capability.
- ❖ Maintain records of expenditures and document resources utilized during recovery.

5.0 Authorities and References

5.1 Authorities

- ❖ See [Section 5.1](#) of Basic Plan.

5.2 References

- ❖ See [Section 5.2](#) of Basic Plan.
- ❖ **Grant County Washington.** June 2007: ESF 3 – Public Works & Engineering.
- ❖ **Cowley County Kansas.** October 2008: ESF 3 – Public Works & Engineering.
- ❖ **Sanders County Montana.** October 2010: ESF 3 – Public Works & Engineering.
- ❖ **National Response Framework.** January 2008. ESF 3 – Public Works & Engineering.

6.0 Attachments

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[Damage Assessment Support Annex](#)

[Debris Management Support Annex](#)

Section II: Emergency Support Functions

Attachment 1: Acronyms

| Acronym | Meaning |
|---------|--|
| CAP | Civil Air Patrol |
| CBRNE | <u>C</u> hemical, <u>B</u> iological, <u>R</u> adiological, <u>N</u> uclear, <u>E</u> xplosive |
| CIKR | Critical Infrastructure & Key Resources |
| DECON | Decontamination |
| DES | Disaster And Emergency Services |
| DPHHS | Department of Public Health & Human Services |
| EAS | Emergency Alert System |
| EOC | Emergency Operations Center |
| EOP | Emergency Operations Plan |
| ESF | Emergency Support Function |
| FEMA | Federal Emergency Management Agency |
| HAZMAT | Hazardous Material |
| IC | Incident Commander |
| ICP | Incident Command Post |
| ICS | Incident Command System |
| IMT | Incident Management Team |
| JIC | Joint Information Center |
| LCCO | Lewis & Clark County |
| LEPC | Local Emergency Planning Committee |
| MANG | Montana Army National Guard |
| MCA | Montana Code Annotated |
| MDT | Montana Department of Transportation |
| MHP | Montana Highway Patrol |
| NIMS | National Incident Management System |
| NIPP | National Infrastructure Protection Plan |
| NRF | National Response Framework |
| OSHA | Occupational Safety & Health Administration |
| PIO | Public Information Officer |
| PPE | Personal Protective Equipment |
| SOG | Standard Operating Guideline |
| SOP | Standard Operating Procedure |
| SSA | Sector Specific Agency |
| SSP | Sector Specific Plan |

Attachment 2: Definitions:

Critical Infrastructure – An interdependent network of vital physical and information facilities, networks, and assets, including in the telecommunications, energy, financial services, water, and transportation sectors, that private business and the Government rely upon. Critical infrastructures are those systems and assets so vital to the Nation that their incapacity or destruction would have a debilitating impact on national security (including national economic security) and/or national public health or safety.

Essential Services: is a general term usually defining both governmental and private industry services provided for general public health & safety (e.g. fire, EMS, law enforcement, public health, healthcare/hospital, waste management, drinking & wastewater services, utilities etc..)as well as services essential to a community's economy (e.g. food, fuel, telecommunications, public transportation, etc.).